

AUG 16 2007

TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.
0182.02

In Re Application Of:

Ferkovich et al.

Serial No.
10/721,881Filing Date
November 26, 2003Examiner
Anthony WeierGroup Art Unit
1761

Invention: Fecundity-Promoting Factor for the Insidious Flower Bug Reared on Artificial Diet

TO THE COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on

The fee for filing this Appeal Brief is: \$500.00

- ☐ A check in the amount of the fee is enclosed.
- ☐ The Director has already been authorized to charge fees in this application to a Deposit Account.
- ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 50-2134


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Name: Anthony Weier, Art Unit 1761

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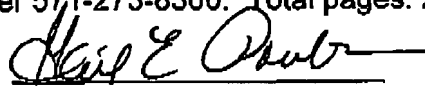
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Date: August 16, 2007
Pages: 28, Including cover sheet

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- ☒ Appeal Brief (26 PAGES)
- ☒ Transmittal of Appeal Brief (1 PAGES)
- ☒ Certificate of Facsimile

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The undersigned hereby certifies that the attached **Appeal Brief and Transmittal of Appeal Brief** was this day, August 16, 2007, filed in the United States Patent and Trademark Office via facsimile to facsimile number 571-273-8300. Total pages: 28



Gail E. Poulos

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Patent Application

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In re the Application of
Ferkovich et al.

Docket No. 0182.02

Art Unit: 1761

Serial No. 10/721,881

Examiner: Anthony Weier

Filed: November 26, 2003

For: Fecundity-Promoting Factor for the Insidious Flower
Bug Reared on Artificial Diet

APPEAL BRIEF

Assistant Commissioner for Patents
P.O. Box 1450
Washington, D.C. 20231

Dear Sir:

1) REAL PARTY IN INTEREST

The real party in interest is the United States of
America as represented by the Secretary of Agriculture,
Washington, D.C.

2) RELATED APPEALS AND INTERFERENCES

NONE

3) STATUS OF THE CLAIMS

Claims 1-14 were originally filed. Claims 4-7 and 11-
14 were held withdrawn by the Office as a result of a
restriction requirement. In next response, Claims 4-7 and
11-14 were cancelled. Claims 1-3 and 8-10 are pending and
are on appeal as originally filed.

4) STATUS OF AMENDMENTS

The first Office action was sent on August 22, 2006,
and it contained a restriction requirement. An election

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with traverse was filed in response on September 1, 2006. A second Office Action, mailed on November 15, 2006, was responsive to the election with traverse and also rejected the elected claims 1-3 and 8-10 under 35 USC § 103(a). An amendment was filed on February 15, 2007 in response to the Office Action mailed on November 15, 2006. This amendment cancelled claims 4-7 and 11-14 in response to the decision of making final the restriction requirement of the Office. A Final Office action was mailed on May 16, 2007, maintaining that claims 1-3 and 8-10 were rejected under 35 USC §103(a). A response after receipt of the final rejection, was filed on June 21, 2007. A Notice of Appeal was filed concurrently with the Amendment after final rejection. The amendment was entered as authorized by the Office in the advisory action dated July 6, 2007 which maintained the rejections under 35 USC 103(a) in the final Office action.

5) SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention relates to insect artificial media protein supplement derived from eggs of insects used for rearing beneficial insects which can enhance the fecundity of beneficial insects.

Claim 1 is drawn to an insect egg protein supplement for rearing beneficial insects comprising: a homogenate of host insect eggs on which a beneficial insect feeds wherein said homogenate is added in amounts effective to increase fecundity of female beneficial insects reared on an artificial diet. See for example, paragraphs [0034], [0039], [0041], [0048], [0053], [0059] and [0060].

Claim 2 is dependent on claim 1 and states that the egg homogenate is further purified by centrifugation, column chromatography, and isoelectric focusing. See for example paragraphs [0038], [0041], [0042], [0049] and [0058].

Claim 3 is dependent on claim 1 and states that said host insect egg is selected from the group consisting of *Plodia interpunctella* and *Ephestia kneuniella* and said beneficial insect is *Orius insidiosus*. See for example paragraphs [0035], [0044], [0048], [0053], [0057] and [0059].

Claim 8 is drawn to an artificial medium for rearing beneficial insects comprising: a homogenate of host insect eggs on which a beneficial insect feeds wherein said homogenate is added in amounts effective to increase fecundity of female beneficial insects reared on an artificial diet. See for example, paragraphs [0034], [0039], [0041], [0048], [0053], [0059] and [0060].

Claim 9 is dependent on claim 8 and states that said egg homogenate is further purified by centrifugation, column chromatography, and isoelectric focusing. See for example paragraphs [0038], [0041], [0042], [0049] and [0058].

Claim 10 is dependent on claim 8 and states that said insect egg is selected from the group consisting of *Plodia interpunctella* and *Ephestia zneuniella* and said beneficial insect is *Orius insidiosus*. See for example paragraphs [0035], [0044], [0048], [0053], [0057] and [0059].

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6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claim 1 is unpatentable under 35 USC 103(a) over the combination of references Cohen (U.S. Patent No. 5945271) taken together with AgAttack article.

2. Whether claim 2 is unpatentable under 35 USC 103(a) over the combination of references Cohen (U.S. Patent No. 5945271) taken together with AgAttack article.

3. Whether claim 3 is unpatentable under 35 USC 103(a) over the combination of references Cohen (U.S. Patent No. 5945271) taken together with AgAttack article.

4. Whether claim 8 is unpatentable under 35 USC 103(a) over the combination of references Cohen (U.S. Patent No. 5945271) taken together with AgAttack article.

5. Whether claim 9 is unpatentable under 35 USC 103(a) over the combination of references Cohen (U.S. Patent No. 5945271) taken together with AgAttack article.

6. Whether claim 10 is unpatentable under 35 USC 103(a) over the combination of references Cohen (U.S. Patent No. 5945271) taken together with AgAttack article.

7) ARGUMENTS

1. Claim 1 is patentable over the art of record. It is improper to reject the claim under 35 USC 103(a) when the combination of references fails to suggest the claimed invention.

Claim 1 was finally rejected under 36 USC 103(a) as being unpatentable over Cohen in view of the AgAttack article. The invention of claim 1 is drawn to an insect egg protein supplement for rearing beneficial insects comprising: a homogenate of host insect eggs on which a beneficial insect feeds wherein said homogenate is added in amounts effective to increase fecundity of female beneficial insects reared on an artificial diet.

Although the final rejection states that the combination of Cohen et al. in view of the AgAttack article renders the instantly claimed invention *prima facie* obvious, the references in combination fail to teach the instantly claimed invention and fail to provide motivation to one of ordinary skill in the art to modify Cohen et al. by the teachings of the AgAttack article to render the claimed invention *prima facie* obvious.

The medium described and claimed by Cohen is "free from insect components". (col. 4, line 18) Cohen et al does not teach the use of a protein supplement which contains a homogenate of host insect eggs. Cohen et al in fact teaches away from the use of insect eggs as a rearing medium, stating there is no difference in fecundity between insects grown on his artificial medium and those grown on insect eggs and by stating that insects grown on the artificial medium taught by Cohen are larger and faster than those grown on insect eggs, *Sitotroga's* eggs in particular. See for example Col 9, lines 53-57.

Cohen et al does not teach the use of a protein supplement of insect eggs as a homogenated paste. The reference clearly teaches the use of ground beef and beef liver and exemplifies other sources such as fish innards, lamb, pork, chicken and cells derived from animals

including insects, and propagated and multiplied using cloning techniques as known to those skilled in the art (See column 6, lines 30-37 of Cohen). In column 5, lines 40-50, the Cohen patent teaches the use of blended hen's egg for the preparation of an adherent, fibrous reticulum suitable for the growth medium of the invention. Cohen teaches that commercial production of beneficial insects is expensive because the producers use eggs of *Ephestia* and *Sitotroga* which make the beneficial insect too expensive for use to control pests in large scale open field type agricultural settings. See column 9, lines 28-38. Cohen fails to teach the use of a homogenate of host insect eggs on which a beneficial insect feeds or a medium containing the homogenate or a purified homogenate or a medium containing a purified homogenate as claimed.

AgAttack fails to cure the deficiencies of Cohen. AgAttack teaches the use of a medium and of whole insect eggs for rearing beneficial insects with the first feeding to be preferably with insect eggs as is done in the industry and the second feeding with an artificial medium as taught by Cohen. AgAttack further teaches that *Orius insidiosus* can not be successfully reared on artificial diet packets alone, which teaches away from what Cohen teaches.

There is simply no motivation to combine the references save for the teachings of the inventors' application to produce the instantly claimed invention. The Office is using the improper standard of **IMPROPER** hindsight analysis. It is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use improper

hindsight reconstruction to deprecate the claimed invention. Cohen et al in view of the AgAttack article fails to render the instantly claimed invention *prima facie* obvious.

The Office is also using the improper standard of obvious to try. It is respectfully submitted that the essence of obviousness does not merely arise by merely picking and choosing from the prior art to produce the claimed invention. In order to establish a *prima facie* case of obviousness it is necessary for the Examiner to present evidence preferably in the form of some teaching, suggestion, incentive, or general available knowledge that one of ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. *Ex parte Levengood*, 28 USPQ2d 1300,1301 (Bd. Pat. & Int'l, 1993). Starting from this correct standard of obviousness, the error of the Office is clear-the rejection is improper because the Office has failed to identify teachings in the prior art motivating the skilled artisan to combine the references in the manner set forth in the rejection. No where does the combination of references teach or suggest to one of ordinary skill in the art how to produce and use the insect egg protein supplement of claim 1. No references or combination of references have been provided which would teach, suggest, or motivate one of ordinary skill in the art how to modify Cohen et al. in view of the AgAttack article to teach a homogenized egg homogenate or a medium containing a homogenate of insect eggs. Therefore the rejection is improper.

2. Claim 2 is patentable over the art of record. It is improper to reject the claim under 35 USC 103(a) when

the combination of references fails to suggest the claimed invention.

Claim 2 was finally rejected under 36 USC 103(a) as being unpatentable over Cohen in view of the AgAttack article. The invention of claim 2 is dependent on claim 1 and states that the egg homogenate is further purified by centrifugation, column chromatography, and isoelectric focusing.

Although the final rejection states that the combination of Cohen et al. in view of the AgAttack article renders the instantly claimed invention *prima facie* obvious, the references in combination fail to teach the instantly claimed invention and fail to provide motivation to one of ordinary skill in the art to modify Cohen et al. by the teachings of the AgAttack article to render the claimed invention *prima facie* obvious.

Cohen fails to teach the use of a homogenate of host insect eggs on which a beneficial insect feeds or a medium containing the homogenate or a purified homogenate or a medium containing a purified homogenate as claimed. No where does the combination of references teach a homogenized egg homogenate or a medium containing a homogenate of insect eggs, they in fact teach away from this result. The combination fails to teach one of ordinary skill in the art at the time the claimed invention was made how to make and use the instantly claimed invention.

The Office states that when considering the preparation of a feed product, particularly one with a benefit, it is notoriously well known to provide purification of ingredients to maximize said benefit and remove the presence of contaminants. However, neither Cohen

nor the AgAttack articles make any mention of the need to purify the media of their respective disclosures. AgAttack states the need to use whole insect eggs, while Cohen describes a media free from insect components.

The Office is using the improper standard of IMPROPER hindsight analysis. It is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use improper hindsight reconstruction to deprecate the claimed invention. Cohen et al in view of the AgAttack article fails to render the instantly claimed invention *prima facie* obvious.

The Office is also using the improper standard of obvious to try. It is respectfully submitted that the essence of obviousness does not merely arise by merely picking and choosing from the prior art to produce the claimed invention. In order to establish a *prima facie* case of obviousness it is necessary for the Examiner to present evidence preferably in the form of some teaching, suggestion, incentive, or general available knowledge that one of ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. *Ex parte Levengood*, 28 USPQ2d 1300,1301 (Bd. Pat. & Int'f, 1993). Starting from this correct standard of obviousness, the error of the Office is clear-the rejection is improper because the Office has failed to identify teachings in the prior art motivating the skilled artisan to combine the references in the manner set forth in the rejection. No where does the combination of references teach or suggest to one of ordinary skill in the art how to produce the

insect egg protein supplement of claim 2. No references or combination of references have been provided which would teach, suggest, or motivate one of ordinary skill in the art how to modify Cohen et al. in view of the AgAttack article to teach a homogenized egg homogenate purified by centrifugation, column chromatography, and isoelectric focusing. Therefore the rejection is improper.

3. Claim 3 is patentable over the art of record. It is improper to reject the claim under 35 USC 103(a) when the combination of references fails to suggest the claimed invention.

Claim 3 was finally rejected under 36 USC 103(a) as being unpatentable over Cohen in view of the AgAttack article. The invention of claim 3 is dependent on claim one and states the host insect egg is selected from the group consisting of *Plodia interpunctella* and *Ephestia kuehniella* and said beneficial insect is *Orius insidiosus*.

Although the final rejection states that the combination of Cohen et al. in view of the AgAttack article renders the instantly claimed invention *prima facie* obvious, the references in combination fail to teach the instantly claimed invention and fail to provide motivation to one of ordinary skill in the art to modify Cohen et al. by the teachings of the AgAttack article to render the claimed invention *prima facie* obvious.

Cohen fails to mention any of the three species mentioned in claim 3 of the present invention. The diet disclosed by Cohen is for entomophages, which are predatory arthropods and parasitic insects (see for example Column 1 lines 12-14), in no instance does he further define a specific beneficial insect such as *Orius insidiosus*.

Cohen also claims a "medium [which] is free from insect components, such as hemolymph" (See column 4, lines 18 and 19 of Cohen). Cohen fails to claim the addition of insect egg homogenate to his growth medium, much less the eggs of the claimed species, *Plodia interpunctella* and *Ephestia kuehniella*, of the present claim.

AgAttack fails to cure the deficiencies of Cohen. AgAttack teaches the use of a medium and of whole insect eggs for rearing beneficial insects with the first feeding to be preferably with insect eggs as is done in the industry and the second feeding with an artificial medium as taught by Cohen. AgAttack further teaches that *Orius insidiosus* can not be successfully reared on artificial diet packets alone, which teaches away from what Cohen teaches. No where does the combination of references teach a homogenized egg homogenate or a medium containing a homogenate of insect eggs, they in fact teach away from this result. The combination fails to teach one of ordinary skill in the art at the time the claimed invention was made how to make and use the instantly claimed invention.

There is simply no motivation to combine the references save for the teachings of the inventors' application to produce the instantly claimed invention. The Office is using the improper standard of **IMPROPER** hindsight analysis. It is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use improper hindsight reconstruction to deprecate the claimed invention. Cohen et al in view of the AgAttack article fails to render the instantly claimed invention *prima facie*

obvious.

The Office is also using the improper standard of obvious to try. It is respectfully submitted that the essence of obviousness does not merely arise by merely picking and choosing from the prior art to produce the claimed invention. In order to establish a prima facie case of obviousness it is necessary for the Examiner to present evidence preferably in the form of some teaching, suggestion, incentive, or general available knowledge that one of ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. Ex parte Levengood, 28 USPQ2d 1300,1301 (Bd. Pat. & Int'f, 1993). Starting from this correct standard of obviousness, the error of the Office is clear-the rejection is improper because the Office has failed to identify teachings in the prior art motivating the skilled artisan to combine the references in the manner set forth in the rejection. No where does the combination of references teach or suggest to one of ordinary skill in the art how to produce the insect egg protein supplement of claim 3. No references or combination of references have been provided which would teach, suggest, or motivate one of ordinary skill in the art how to modify Cohen et al. in view of the AgAttack article to teach a homogenized egg homogenate or a medium containing a homogenate of insect eggs, wherein said egg is selected from a group consisting of *Plodia interpunctella* and *ephestia kneuniella* and said beneficial insect is *Orius insidiosus*. Therefore the rejection is improper.

4. Claim 8 is patentable over the art of record. It is improper to reject the claim under 35 USC 103(a) when the combination of references fails to suggest the claimed

invention.

Claim 8 was finally rejected under 36 USC 103(a) as being unpatentable over Cohen in view of the AgAttack article. The invention of claim 8 is drawn to an artificial medium for rearing beneficial insects comprising: a homogenate of host insect eggs on which a beneficial insect feeds wherein said homogenate is added in amounts effective to increase fecundity of female beneficial insects reared on an artificial diet.

Although the final rejection states that the combination of Cohen et al. in view of the AgAttack article renders the instantly claimed invention *prima facie* obvious, the references in combination fail to teach the instantly claimed invention and fail to provide motivation to one of ordinary skill in the art to modify Cohen et al. by the teachings of the AgAttack article to render the claimed invention *prima facie* obvious.

The medium described and claimed by Cohen is "free from insect components". (col. 4, line 18) Cohen et al does not teach the use of a protein supplement which contains a homogenate of insect eggs. Cohen et al in fact teaches away from the use of insect eggs as a rearing medium, stating there is no difference in fecundity between insects grown on his artificial medium and those grown on insect eggs and by stating that insects grown on the artificial medium taught by Cohen are larger and faster than those grown on insect eggs, *Sitotroga's* eggs in particular. See for example Col 9, lines 53-57.

Cohen et al does not teach the use of a protein supplement which contains insect eggs as a homogenated paste. The reference clearly teaches the use of ground beef and beef liver and exemplifies other sources such as

fish innards, lamb, pork, chicken and cells derived from animals including insects, and propagated and multiplied using cloning techniques as known to those skilled in the art (See column 6, lines 30-37 of Cohen). In column 5, lines 40-50, the Cohen patent teaches the use of blended hen's egg for the preparation of an adherent, fibrous reticulum suitable for the growth medium of the invention. Cohen teaches that commercial production of beneficial insects is expensive because the producers use eggs of *Ephestia* and *Sitotroga* which make the beneficial insect too expensive for use to control pests in large scale open field type agricultural settings. See column 9, lines 28-38. Cohen fails to teach the use of a homogenate of host insect eggs on which a beneficial insect feeds or a medium containing the homogenate or a purified homogenate or a medium containing a purified homogenate as claimed.

AgAttack fails to cure the deficiencies of Cohen. AgAttack teaches the use of a medium and of whole insect eggs for rearing beneficial insects with the first feeding to be preferably with insect eggs as is done in the industry and the second feeding with an artificial medium as taught by Cohen. AgAttack further teaches that *Orius insidiosus* can not be successfully reared on artificial diet packets alone, which teaches away from what Cohen teaches.

There is simply no motivation to combine the references save for the teachings of the inventors' application to produce the instantly claimed invention. The Office is using the improper standard of IMPROPER hindsight analysis. It is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed

invention is rendered obvious. One cannot use improper hindsight reconstruction to deprecate the claimed invention. Cohen et al in view of the AgAttack article fails to render the instantly claimed invention *prima facie* obvious.

The Office is also using the improper standard of obvious to try. It is respectfully submitted that the essence of obviousness does not merely arise by merely picking and choosing from the prior art to produce the claimed invention. In order to establish a *prima facie* case of obviousness it is necessary for the Examiner to present evidence preferably in the form of some teaching, suggestion, incentive, or general available knowledge that one of ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. *Ex parte Levengood*, 28 USPQ2d 1300,1301 (Bd. Pat. & Int'f, 1993). Starting from this correct standard of obviousness, the error of the Office is clear-the rejection is improper because the Office has failed to identify teachings in the prior art motivating the skilled artisan to combine the references in the manner set forth in the rejection. No where does the combination of references teach or suggest to one of ordinary skill in the art how to produce and use the artificial medium for rearing beneficial insects of claim 8. No references or combination of references have been provided which would teach, suggest, or motivate one of ordinary skill in the art how to modify Cohen et al. in view of the AgAttack article to teach a homogenized egg homogenate or a medium containing a homogenate of insect eggs. Therefore the rejection is improper.

5. Claim 9 is patentable over the art of record. It

is improper to reject the claim under 35 USC 103(a) when the combination of references fails to suggest the claimed invention.

Claim 9 was finally rejected under 36 USC 103(a) as being unpatentable over Cohen in view of the AgAttack article. The invention of claim 9 is dependent on claim 8 and states that the artificial medium of claim 8 wherein said egg homogenate is further purified by centrifugation, column chromatography, and isoelectric focusing.

Although the final rejection states that the combination of Cohen et al. in view of the AgAttack article renders the instantly claimed invention *prima facie* obvious, the references in combination fail to teach the instantly claimed invention and fail to provide motivation to one of ordinary skill in the art to modify Cohen et al. by the teachings of the AgAttack article to render the claimed invention *prima facie* obvious.

Cohen fails to teach the use of a homogenate of host insect eggs on which a beneficial insect feeds or a medium containing the homogenate or a purified homogenate or a medium containing a purified homogenate as claimed. No where does the combination of references teach a homogenized egg homogenate or a medium containing a homogenate of insect eggs, they in fact teach away from this result. The combination fails to teach one of ordinary skill in the art at the time the claimed invention was made how to make and use the instantly claimed invention.

The Office states that when considering the preparation of a feed product, particularly one with a benefit, it is notoriously well known to provide purification of ingredients to maximize said benefit and

remove the presence of contaminants. However, neither Cohen nor the AgAttack articles make any mention of the need to purify the media of their respective disclosures. AgAttack states the need to use whole insect eggs, while Cohen describes a media free from insect components.

The Office is using the improper standard of **IMPROPER** hindsight analysis. It is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use improper hindsight reconstruction to deprecate the claimed invention. Cohen et al in view of the AgAttack article fails to render the instantly claimed invention *prima facie* obvious.

The Office is also using the improper standard of obvious to try. It is respectfully submitted that the essence of obviousness does not merely arise by merely picking and choosing from the prior art to produce the claimed invention. In order to establish a *prima facie* case of obviousness it is necessary for the Examiner to present evidence preferably in the form of some teaching, suggestion, incentive, or general available knowledge that one of ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. *Ex parte Levengood*, 28 USPQ2d 1300,1301 (Bd. Pat. & Int'f, 1993). Starting from this correct standard of obviousness, the error of the Office is clear-the rejection is improper because the Office has failed to identify teachings in the prior art motivating the skilled artisan to combine the references in the manner set forth in the rejection. No where does the combination of references teach or suggest

to one of ordinary skill in the art how to produce the insect egg protein supplement of claim 9. No references or combination of references have been provided which would teach, suggest, or motivate one of ordinary skill in the art how to modify Cohen et al. in view of the AgAttack article to teach a homogenized egg homogenate purified by centrifugation, column chromatography, and isoelectric focusing. Therefore the rejection is improper.

6. Claim 10 is patentable over the art of record. It is improper to reject the claim under 35 USC 103(a) when the combination of references fails to suggest the claimed invention.

Claim 10 was finally rejected under 36 USC 103(a) as being unpatentable over Cohen in view of the AgAttack article. The invention of claim 10 is dependent on claim 8 and states the artificial medium of claim 8 wherein said host insect egg is selected from the group consisting of *Plodia interpunctella* and *Ephestia kuehniella* and said beneficial insect is *Orius insidiosus*.

Although the final rejection states that the combination of Cohen et al. in view of the AgAttack article renders the instantly claimed invention *prima facie* obvious, the references in combination fail to teach the instantly claimed invention and fail to provide motivation to one of ordinary skill in the art to modify Cohen et al. by the teachings of the AgAttack article to render the claimed invention *prima facie* obvious.

Cohen fails to mention any of the three species mentioned in claim 10 of the present invention. The diet disclosed by Cohen is for entomophages, which are predatory arthropods and parasitic insects, in no instance does he

further define a specific beneficial insect such as *Orius insidiosus*. Cohen also claims a "medium [which] is free from insect components, such as hemolymph" (See column 4, lines 18 and 19 of Cohen). Cohen fails to claim the addition of insect egg homogenates to his growth medium, much less the eggs of the claimed species, *Plodia interpunctella* and *Ephestia kuehniella*, of the present claim.

AgAttack fails to cure the deficiencies of Cohen. AgAttack teaches the use of a medium and of whole insect eggs for rearing beneficial insects with the first feeding to be preferably with insect eggs as is done in the industry and the second feeding with an artificial medium as taught by Cohen. AgAttack further teaches that *Orius insidiosus* can not be successfully reared on artificial diet packets alone, which teaches away from what Cohen teaches. No where does the combination of references teach a homogenized egg homogenate or a medium containing a homogenate of insect eggs, they in fact teach away from this result. The combination fails to teach one of ordinary skill in the art at the time the claimed invention was made how to make and use the instantly claimed invention.

There is simply no motivation to combine the references save for the teachings of the inventors' application to produce the instantly claimed invention. The Office is using the improper standard of **IMPROPER** hindsight analysis. It is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use improper hindsight reconstruction to deprecate the claimed

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The Office is also using the improper standard of obvious to try. It is respectfully submitted that the essence of obviousness does not merely arise by merely picking and choosing from the prior art to produce the claimed invention. In order to establish a *prima facie* case of obviousness it is necessary for the Examiner to present evidence preferably in the form of some teaching, suggestion, incentive, or general available knowledge that one of ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. *Ex parte Levengood*, 28 USPQ2d 1300,1301 (Bd. Pat. & Int'f, 1993). Starting from this correct standard of obviousness, the error of the Office is clear-the rejection is improper because the Office has failed to identify teachings in the prior art motivating the skilled artisan to combine the references in the manner set forth in the rejection. No where does the combination of references teach or suggest to one of ordinary skill in the art how to produce the insect egg protein supplement of claim 10. No references or combination of references have been provided which would teach, suggest, or motivate one of ordinary skill in the art how to modify Cohen et al. in view of the AgAttack article to teach a homogenized egg homogenate or a medium containing a homogenate of insect eggs, wherein said egg is selected from a group consisting of *Plodia interpunctella* and *ephestia kneuniella* and said beneficial insect is *Orius insidiosus*. Therefore the rejection is improper.

In view of the fact that the combination of references fails to render the claimed invention obvious, Appellants respectfully request this Board to reverse the final rejection in due course.

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August 16, 2007
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Respectfully submitted,

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The undersigned hereby certifies that the attached APPEAL BRIEF was this day, August 16, 2007 filed in the United States Patent and Trademark Office via facsimile to facsimile number 571-273-8300. Total pages: 26

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8) CLAIM APPENDIX

Claim 1. An insect egg protein supplement for rearing beneficial insects comprising:

A homogenate of host insect eggs on which a beneficial insect feeds wherein said homogenate is added in amounts effective to increase fecundity of female beneficial insects reared on an artificial diet.

Claim 2. The egg protein supplement of claim 1 wherein said egg homogenate is further purified by centrifugation, column chromatography, and isoelectric focusing.

Claim 3. The supplement of claim 1 wherein said host insect egg is selected from the group consisting of *Plodi interpunctella* and *Ephestia kuehniella* and said beneficial insect is *Orius insidiosus*.

Claim 8. An artificial medium for rearing beneficial insects comprising:

A homogenate of host insect eggs on which a beneficial insect feeds wherein said homogenate is added in amounts effective to increase fecundity of female beneficial insects reared on an artificial diet.

Claim 9. The artificial medium of claim 8 wherein said egg homogenate is further purified by centrifugation, column chromatography, and isoelectric focusing.

Claim 10. The artificial medium of claim 8 wherein said host insect egg is selected from the group consisting of *Plodia interpunctella* and *Ephestia kuehniella* and said

beneficial insect is *Orius insidiosus*.

9) EVIDENCE APPENDIX

NONE

10) RELATED PROCEEDINGS APPENDIX

NONE